

1 **Amendment to the Claims**

2 Please amend Claims 1, 2, 4, 5, 6, 55, 57, 91, and 96-99 as follows:

3 1. (Currently Amended) A physiological training and evaluation simulator suitable for training
4 and testing personnel, comprising a simulated physiological structure and an evaluation circuit including a
5 conductive elastomer, wherein a conductive path through a segment of the evaluation circuit that is
6 configured as a portion of the simulated physiological structure is complete prior to a manipulation of said
7 portion of the simulated physiological structure and said evaluation circuit is configured to provide a
8 signal when the manipulation of said portion of the simulated physiological structure causes the
9 conductive path through the segment of the evaluation circuit that is configured as a portion of the
10 simulated physiological structure to be opened.

11 2. (Currently Amended) A physiological training and evaluation simulator suitable for training
12 and testing personnel, comprising:

13 (a) a simulated physiological structure; and

14 (b) an evaluation circuit including a conductive elastomer, the conductive
15 elastomer enhancing the realism of the simulated physiological structure, the conductive elastomer
16 exhibiting a self-healing ability with respect to punctures not exhibited by conductive elastomers
17 based on a metal foil combined with an elastomer, the conductive elastomer being configured as a
18 portion of the simulated physiological structure, said evaluation circuit being configured to provide
19 an electrical signal relating to a simulated procedure being performed on the simulated physiological
20 structure, the electrical signal originating from the portion of the simulated physiological structure
21 including the conductive elastomer without requiring:

22 (i) an electrical current to be provided by an instrument placed in contact
23 with the evaluation circuit during the simulated procedure; or

24 (ii) the use of an electrically conductive instrument to electrically couple
25 portions of the evaluation circuit together.

26 3. (Canceled)

27 4. (Currently Amended) The physiological training and evaluation simulator of Claim 2, wherein
28 ~~the evaluation circuit is configured to provide the signal when a change in pressure is applied to said~~
29 ~~portion of the simulated physiological structure~~ the conductive elastomer comprises a conductive
30 carbon dispersed in an elastomeric matrix.

5. (Currently Amended) The physiological training and evaluation simulator of Claim 4 ~~Claim 2~~, wherein ~~the evaluation circuit comprises a piezoelectric element responsive to a change in pressure~~ the conductive elastomer comprises a metallic powder dispersed in an elastomeric matrix.

6. (Currently Amended) The physiological training and evaluation simulator of Claim 4 ~~Claim 2~~, wherein the evaluation circuit comprises a capacitance based sensor, and the signal corresponds to a magnitude of the applied pressure.

7. (Previously Presented) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit is configured to provide the signal when said portion of the simulated physiological structure including the conductive elastomer is touched by a user of the physiological training and evaluation simulator.

8. (Original) The physiological training and evaluation simulator of Claim 7, wherein the evaluation circuit comprises a capacitance sensitive switch.

9. (Previously Presented) The physiological training and evaluation simulator of Claim 7, wherein the evaluation circuit comprises a resistance sensitive switch.

10. (Original) The physiological training and evaluation simulator of Claim 7, wherein the evaluation circuit comprises a radio sensitive switch.

11. (Previously Presented) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit is configured to provide the signal when a manipulation of said portion of the simulated physiological structure including the conductive elastomer causes the evaluation circuit to close.

12. -13. (Canceled)

14. (Previously Presented) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit is incomplete at a gap in the evaluation circuit, and wherein the evaluation circuit is completed when adjacent ends of the evaluation circuit are coupled together to complete the circuit.

15. (Previously Presented) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit is configured to provide the signal when a manipulation of said portion of the simulated physiological structure including the conductive elastomer causes the evaluation circuit to open.

16. (Canceled)

1 17. (Original) The physiological training and evaluation simulator of Claim 2, further comprising
2 a sensor coupled with the evaluation circuit, and the evaluation circuit is configured to provide the signal
3 when wherein the sensor indicates a change in a physical property has been detected.

4 18. (Previously Presented) The physiological training and evaluation simulator of Claim 17,
5 wherein the sensor is configured to detect a change in temperature.

6 19. (Previously Presented) The physiological training and evaluation simulator of Claim 17,
7 wherein the sensor is a chemical sensor.

8 20. (Original) The physiological training and evaluation simulator of Claim 2, further comprising
9 additional evaluation circuits, each additional evaluation circuit comprising a conductive elastomer,
10 wherein each additional evaluation circuit is configured to provide a signal when a different portion of the
11 simulated physiological structure is manipulated during a procedure performed on the simulated
12 physiological structure.

13 21. (Previously Presented) The physiological training and evaluation simulator of Claim 2,
14 further comprising an indicator coupled to the evaluation circuit, such that in response to the signal the
15 indicator provides an indication relating to the performance of the simulated procedure.

16 22. (Original) The physiological training and evaluation simulator of Claim 21, wherein the
17 indicator comprises a light source, light emitted by the light source providing feedback regarding the
18 performance of the procedure.

19 23. (Original) The physiological training and evaluation simulator of Claim 21, wherein the
20 indicator comprises a meter, a change in the meter providing feedback regarding the performance of the
21 procedure.

22 24. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
23 simulated physiological structure is a simulated human tissue structure.

24 25. (Original) The physiological training and evaluation simulator of Claim 24, wherein the
25 simulated human tissue structure comprises:

26 (a) at least one simulated membranous layer comprising at least one elastomeric
27 layer; and

28 (b) at least one simulated sub-membranous layer comprising at least one elastomeric
29 layer underlying a first membranous layer.

30 ///

26. (Original) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit is implemented in three dimensions.

27. (Original) The physiological training and evaluation simulator of Claim 26, wherein the evaluation circuit is implemented as a three-dimensional grid.

28. (Original) The physiological training and evaluation simulator of Claim 27, wherein the three-dimensional grid encompasses a majority of the simulated physiological structure.

29. (Original) The physiological training and evaluation simulator of Claim 2, wherein said simulated physiological structure includes a plurality of integral fluid channels, and wherein the evaluation circuit formed of the conductive elastomer is incorporated into at least some of the integral fluid channels.

30. (Original) The physiological training and evaluation simulator of Claim 29, wherein the evaluation circuit is incorporated into a wall of at least some of the fluid channels, such that the evaluation circuit provides the signal if such a wall is damaged during the simulated procedure.

31. (Original) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit couples to a processor configured to manipulate the signal.

32. (Original) The physiological training and evaluation simulator of Claim 31, wherein the simulated physiological structure comprises a physiological control element configured to produce a simulated physiological response in the simulated physiological structure, the physiological control element being coupled to the evaluation circuit so that the processor uses the evaluation circuit to control the physiological control element.

33. (Original) The physiological training and evaluation simulator of Claim 32, wherein the physiological control element comprises at least one of a servo and a pump.

34. (Original) The physiological training and evaluation simulator of Claim 31, wherein the evaluation circuit is implemented with a plurality of branches that extend throughout at least a portion of the simulated physiological structure where the simulated procedure will be performed, so that by monitoring the plurality of branches, the processor determines a three-dimensional location of an instrument during the simulated procedure.

35. (Original) The physiological training and evaluation simulator of Claim 2, wherein the simulated physiological structure comprises a simulated organ.

///

36. (Original) The physiological training and evaluation simulator of Claim 35, wherein the evaluation circuit comprises a pressure sensor disposed at a periphery of the simulated organ.

37. (Original) The physiological training and evaluation simulator of Claim 2, wherein the evaluation circuit is implemented as a neural network that substantially corresponds to a neural network in a physiological structure upon which the simulated physiological structure is modeled.

38. (Original) The physiological training and evaluation simulator of Claim 2, wherein the simulated physiological structure comprises a simulated joint.

39. (Original) The physiological training and evaluation simulator of Claim 38, wherein the evaluation circuit is disposed proximate to a location on the simulated joint at which a medical device will be employed in the simulated medical procedure, to evaluate whether a person performed the procedure properly.

40. (Original) The physiological training and evaluation simulator of Claim 2, wherein the simulated physiological structure comprises a simulated bone.

41. (Original) The physiological training and evaluation simulator of Claim 40, wherein the evaluation circuit is disposed at a periphery of the simulated bone, proximate a location on the simulated bone at which a medical device will be employed in the simulated medical procedure, to evaluate whether a person performed the procedure properly.

42. (Canceled)

43. (Original) The physiological training and evaluation simulator of Claim 2, wherein the physiological training and evaluation simulator comprises a surgical trainer, and the simulated physiological structure comprises at least one of a simulated human tissue structure and a simulated organ included in the surgical trainer.

///

///

///

///

///

///

///

///

44. (Original) The physiological training and evaluation simulator of Claim 43, wherein the surgical trainer comprises:

(a) at least one simulated structure corresponding to an internal anatomical structure of a human body;

(b) an exterior cover encompassing a substantial portion of the surgical trainer, the exterior cover having at least one predefined opening defining an operative site, so that each opening is disposed adjacent to a different structure, to facilitate access to said structure; and

(c) the simulated human tissue structure is incisable, and is disposed proximate to each predefined opening, such that access to said at least one structure via the adjacent predefined opening requires making an incision in said simulated human tissue structure, an exterior surface of each simulated human tissue structure being substantially flush with respect to an outer surface of the exterior cover, each simulated human tissue structure being removable to be replaced after use, said simulated human tissue structure comprising a plurality of layers, said plurality of layers generally corresponding to layers of tissue found in a human being at a location corresponding to the operative site, and at least one of the plurality of layers including the conductive elastomer.

45. (Previously Presented) A medical training simulator suitable for medical skills training and evaluation, the medical training model comprising a simulated physiological structure and an evaluation circuit including a conductive elastomer, the evaluation circuit including a first conductive segment and a second conductive segment disposed adjacent to each other, without being electrically coupled to each other, the first conductive segment and the second conductive segment being part of the simulated physiological structure, said evaluation circuit being configured to provide data related to proper execution of a simulated medical procedure being performed using the simulated physiological structure when the first conductive segment and the second conductive segment are placed in physical contact with each other during the simulated medical procedure, thereby completing the evaluation circuit and enabling the evaluation circuit to provide the data related to the proper execution of the simulated medical procedure.

46.-47. (Canceled)

///

///

///

48. (Previously Presented) The medical training simulator of Claim 45, wherein the evaluation circuit is configured to provide additional data in response to at least one of the following conditions:

- (a) a specific portion of the simulated physiological structure is manipulated;
- (b) pressure is applied to at least a portion of the simulated physiological structure;
- (c) at least a portion of the simulated physiological structure is touched;
- (d) a manipulation of at least a portion of the simulated physiological structure causes the evaluation circuit to close;
- (e) a manipulation of at least a portion of the simulated physiological structure causes the evaluation circuit to open;
- (f) a sensor coupled to the evaluation circuit detects a change in a physical property; and
- (g) an instrument is placed in proximity to at least a portion of the simulated physiological structure.

49. (Previously Presented) The medical training simulator of Claim 45, further comprising a light source coupled to the evaluation circuit, such that light emitted by the light source provides an indication of a quality with which the simulated medical procedure has been performed.

50. (Previously Presented) The medical training simulator of Claim 49, wherein the evaluation circuit conveys a potential that triggers activation of the light source.

51. (Previously Presented) The medical training simulator of Claim 45, further comprising a simulated medical device to be used when performing the simulated medical procedure, wherein the simulated medical device includes an inductor, and wherein the evaluation circuit is configured to receive a current induced by the inductor when the simulated medical device is correctly utilized to perform the simulated medical procedure.

52. (Previously Presented) The medical training simulator of Claim 45, further comprising a simulated medical device to be used when performing the simulated medical procedure, wherein the evaluation circuit comprises a capacitance based sensor configured to provide data relating to a position of the simulated medical device relative to the simulated physiological structure during the simulated medical procedure.

///

///

1 53. (Previously Presented) The medical training simulator of Claim 45, wherein the first
2 conductive segment and the second conductive segment are separated by a non conductive segment, such
3 that the proper execution of the simulated medical procedure requires the removal of the non conductive
4 segment and the first conductive segment and the second conductive segment to be coupled together to
5 complete the circuit.

6 54. (Previously Presented) The medical training simulator of Claim 45, wherein the first
7 conductive segment and the second conductive segment are separated by a gap, such that the proper
8 execution of the simulated medical procedure requires the at least one of the first conductive segment and
9 the second conductive segment to be repositioned and placed in contact with the other of the first
10 conductive segment and the second conductive segment to complete the circuit.

11 ///

12 ///

13 ///

14 ///

15 ///

16 ///

17 ///

18 ///

19 ///

20 ///

21 ///

22 ///

23 ///

24 ///

25 ///

26 ///

27 ///

28 ///

29 ///

30 ///

55. (Currently Amended) A medical training simulator suitable for medical skills training and evaluation, the medical training simulator comprising a simulated physiological structure and an evaluation circuit including a conductive elastomer, said conductive elastomer comprising a first elastomeric layer, a second elastomeric layer, and a conductor encapsulated by the first and second elastomeric layers, at least a segment of the evaluation circuit including the conductive elastomer being configured as a portion of the simulated physiological structure, wherein the evaluation circuit is configured to provide data via an electrical signal originating from the portion of the simulated physiological structure in response to at least one of the following conditions:

(a) ~~the portion of the simulated physiological structure is manipulated without using an electrically conductive instrument configured to introduce an electrical current into the evaluation circuit or provide a conductive path between different portions of the evaluation circuit;~~

(b) ~~pressure is applied to the portion of the simulated physiological structure without using an electrically conductive instrument configured to introduce an electrical current into the evaluation circuit or provide a conductive path between different portions of the evaluation circuit;~~

(e) ~~the portion of the simulated physiological structure is touched without using an electrically conductive instrument configured to introduce an electrical current into the evaluation circuit or provide a conductive path between different portions of the evaluation circuit;~~

(d) ~~a manipulation of the portion of the simulated physiological structure causes a conductive path of the evaluation circuit to be completed, without using an electrically conductive instrument configured to introduce an electrical current into the evaluation circuit or provide a conductive path between different portions of the evaluation circuit;~~

(e)(a) a manipulation of the portion of the simulated physiological structure causes the conductive path of the evaluation circuit to be opened;

(f)(b) a sensor coupled to the evaluation circuit detects a change in a non-electrical physical property, wherein the sensor is disposed within the simulated physiological structure; and

(g)(c) an instrument is placed in proximity to at least a portion of the simulated physiological structure, but not in contact with any portion of the evaluation circuit, the instrument not being configured to introduce an electrical current into the evaluation circuit.

///

///

56. (Previously Presented) The medical training simulator of Claim 55, wherein the evaluation circuit is distributed throughout the portion of the simulated physiological structure as a three dimensional grid.

57. (Currently Amended) A method for making a medical training simulator suitable for medical skills training and evaluation, the method comprising the steps of:

(a) determining a physiological structure that the medical training simulator is to simulate;

(b) determining a simulated medical procedure that will be performed on a simulated physiological structure corresponding to the physiological structure; and

(c) constructing a medical training simulator including:

(i) a simulated physiological structure corresponding to the physiological structure of step (a); and

(ii) an evaluation circuit comprising a conductive elastomer, at least some of the conductive elastomer being configured as a portion of the simulated physiological structure, the conductive elastomer exhibiting a self-healing ability with respect to punctures not exhibited by conductive elastomers based on a metal foil combined with an elastomer, the evaluation circuit being configured to provide feedback relating to the simulated medical procedure of step (b), such that the evaluation circuit provides the feedback without the use of an electrically conductive instrument configured to introduce an electrical current into the evaluation circuit in the portion of the simulated physiological structure or provide a conductive path between different segments of the evaluation circuit in the portion of the simulated physiological structure during the simulated medical procedure, the feedback comprising an electrical signal originating from the evaluation circuit in the portion of the simulated physiological structure.

58. (Previously Presented) The method of Claim 57, wherein the step of constructing the medical training simulator comprises the step of incorporating the evaluation circuit proximate to a location on the simulated physiological structure at which the simulated medical procedure is performed, to evaluate if a person performed the simulated medical procedure properly.

59. (Original) The method of Claim 58, wherein the step of applying the evaluation circuit comprises the step of incorporating the evaluation circuit proximate to a periphery of the simulated physiological structure.

60. (Previously Presented) The method of Claim 57, wherein the step of constructing the medical training simulator comprises the step of configuring the evaluation circuit to provide data in response to at least one of the following conditions:

- (a) the portion of the simulated physiological structure is manipulated;
 - (b) pressure is applied to the portion of the simulated physiological structure;
 - (c) the portion of the simulated physiological structure is touched;
 - (d) a manipulation of the portion of the simulated physiological structure causes the evaluation circuit to close;
 - (e) a manipulation of the portion of the simulated physiological structure causes the evaluation circuit to open;
 - (f) a sensor coupled to the evaluation circuit detects a change in a physical property;
- and
- (g) an instrument is placed in proximity to the portion of the simulated physiological structure.

61. (Previously Presented) The method of Claim 57, wherein the step of constructing the medical training simulator comprises the step of configuring the evaluation circuit to include an indicator that provides an indication of whether the medical device is properly utilized to perform the simulated medical procedure.

62.-73. (Canceled)

///

///

///

///

///

///

///

///

///

///

///

74. (Previously Presented) A method for using a medical training simulator for medical skills training and evaluation, comprising the steps of:

(a) providing a medical training simulator comprising a simulated physiological structure a conductive elastomer-based evaluation circuit configured to evaluate a simulated medical procedure;

(b) using the conductive elastomer-based evaluation circuit to monitor a person's performance of the simulated medical procedure; and

(c) enabling a user to selectively direct the evaluation circuit's indication of the performance to at least one member selected from the group of members consisting of:

(i) the user, so that the indication is immediately apparent to the user;

(ii) to another party; and

(iii) to an electronic storage location.

75. (Canceled)

76. (Original) The method of Claim 74, wherein the indication produced by the conductive elastomer-based evaluation circuit is used to provide at least one of a visual and an audible feedback to the person during the execution of the simulated medical procedure.

77. (Original) The method of Claim 74, wherein the indication produced by the conductive elastomer-based evaluation circuit is used to determine a rate of learning.

78. (Original) The method of Claim 74, wherein the indication produced by the conductive elastomer-based evaluation circuit is used to determine a physiological response for the medical training simulator to emulate.

///

///

///

///

///

///

///

///

///

79. (Previously Presented) A physiological training and evaluation simulator system for training and testing personnel, comprising:

(a) a simulated physiological structure including a conductive elastomer-based evaluation circuit configured to provide data relating to a simulated procedure being performed on the simulated physiological structure, the simulated physiological structure being selected from the group of simulated physiological structures consisting of a bone and a joint; and

(b) a controller coupled to the conductive elastomer-based evaluation circuit, the controller being configured to implement a plurality of functions, including:

(i) storing data obtained from the conductive elastomer-based evaluation circuit; and

(ii) processing the data obtained from the conductive elastomer-based evaluation circuit to determine a score rating a quality of the simulated procedure.

80. (Original) The physiological training and evaluation simulator system of Claim 79, wherein the processor is further configured to implement the function of comparing the score for the simulated procedure to at least one score from a previous simulated procedure.

81. (Original) The physiological training and evaluation simulator system of Claim 79, wherein the processor is further configured to implement the function of determining a rate of learning.

82. -87. (Canceled)

///

///

///

///

///

///

///

///

///

///

///

///

1 88. (Previously Presented) A medical training simulator suitable for medical skills training and
2 evaluation, the medical training model comprising a simulated physiological structure and an evaluation
3 circuit including a conductive elastomer, the evaluation circuit including a first conductive segment and a
4 second conductive segment separated by a non conductive segment such that they are not electrically
5 coupled to each other, the first conductive segment and the second conductive segment being part of the
6 simulated physiological structure, said evaluation circuit being configured to provide data related to
7 proper execution of a simulated medical procedure being performed using the simulated physiological
8 structure when the non conductive segment is removed and the first conductive segment and the second
9 conductive segment are coupled together during the simulated medical procedure, thereby completing the
10 evaluation circuit and enabling the evaluation circuit to provide the data related to the proper execution of
11 the simulated medical procedure.

12 89. (Previously Presented) A medical training simulator suitable for medical skills training and
13 evaluation, the medical training model comprising a simulated physiological structure and an evaluation
14 circuit including a conductive elastomer, the evaluation circuit including a first conductive segment and a
15 second conductive segment are separated by a gap, such that they are not electrically coupled to each
16 other, the first conductive segment and the second conductive segment being part of the simulated
17 physiological structure, said evaluation circuit being configured to provide data related to proper
18 execution of a simulated medical procedure being performed using the simulated physiological structure
19 when either the first conductive segment or the second conductive segment are repositioned and placed in
20 contact with either the other of the first conductive segment or the other of the second conductive segment
21 during the simulated medical procedure, thereby completing the evaluation circuit and enabling the
22 evaluation circuit to provide the data related to the proper execution of the simulated medical procedure.

23 ///

24 ///

25 ///

26 ///

27 ///

28 ///

29 ///

30 ///

90. (Previously Presented) A method for training medical personnel, the method comprising the steps of:

(a) providing a medical simulator including a simulated physiological structure comprising:

(i) a target area to be accessed during a simulated medical procedure; and
(ii) a non-target area representing a portion of the simulated physiological structure that can be undesirably damaged if the simulated medical procedure is performed improperly, that portion comprising a conductive elastomer based evaluation circuit, the evaluation circuit being configured to provide a signal relating to a simulated procedure being performed on the simulated physiological structure, the signal being provided when that portion is improperly accessed during a simulated medical procedure;

(b) enabling a trainee to use the medical simulator to execute a simulated medical procedure; and

(c) monitoring the conductive elastomer based evaluation circuit during the simulated medical procedure to determine if the trainee performs the simulated medical procedure properly, improper performance being indicated by receipt of the signal from the conductive elastomer based evaluation circuit during the simulated medical procedure, the signal indicating that the trainee improperly accessed the non-target portion of the simulated physiological structure during the simulated medical procedure.

///

///

///

///

///

///

///

///

///

///

///

91. (Currently Amended) A physiological training and evaluation simulator suitable for training and testing personnel who perform a simulated procedure, comprising a simulated physiological structure including an outer surface and a plurality of evaluation circuits, each evaluation circuit comprising a conductive elastomer, the plurality of evaluations circuits including:

(a) a first evaluation circuit positioned to provide feedback when an instrument is properly positioned relative to the simulated physiological structure during the simulated procedure, the first evaluation circuit defining a first generally planar two dimensional region; and

(b) a second evaluation circuit positioned to provide feedback when an instrument is improperly positioned relative to the simulated physiological structure during the simulated procedure, the second evaluation circuit defining a second generally planar two dimensional region, such that the first and second generally two dimensional regions are substantially parallel to the outer surface of the simulated physiological structure.

92. (Previously Presented) The simulator of Claim 91, further comprising:

(a) a first light electrically coupled to the first evaluation circuit, such that when the instrument is properly positioned relative to the simulated physiological structure during the simulated procedure the first light is activated; and

(b) a second light electrically coupled to the second evaluation circuit, such that when the instrument is not properly positioned relative to the simulated physiological structure during the simulated procedure the second light is activated.

93. (Previously Presented) The simulator of Claim 92, further comprising an additional evaluation circuit electrically coupled to an additional light, the additional evaluation circuit being positioned to provide feedback when an instrument is improperly positioned relative to the simulated physiological structure during the simulated procedure; the additional evaluation circuit being positioned closer to the first evaluation circuit than is the second evaluation circuit, such that illumination of the third light indicates that the instrument is relatively closer to the first evaluation circuit, while illumination of the second light indicates that the instrument is relatively farther away from the first evaluation circuit.

///

///

///

94. (Previously Presented) The simulator of Claim 91, further comprising a third evaluation circuit positioned to provide feedback when an instrument is improperly positioned relative to the simulated physiological structure during the simulated procedure, the third evaluation circuit defining a third generally two dimensional region, such that the first, second and third generally two dimensional regions achieve a bulls eye type configuration.

95. (Previously Presented) A physiological training and evaluation simulator suitable for training and testing personnel who perform a simulated procedure, comprising a simulated physiological structure including a plurality of evaluation circuits, each evaluation circuit comprising a conductive elastomer, the plurality of evaluations circuits including:

(a) a first evaluation circuit positioned to provide feedback when an instrument is properly positioned relative to the simulated physiological structure during the simulated procedure, the first evaluation circuit defining a first generally two dimensional region; and

(b) a second evaluation circuit positioned to provide feedback when an instrument is properly positioned relative to the simulated physiological structure during the simulated procedure, the second evaluation circuit defining a second generally two dimensional region, such that the first and second generally two dimensional regions are spaced apart from one another and substantially parallel to one another.

96. (Currently Amended) A physiological training and evaluation simulator suitable for training and testing personnel, the simulator including a simulated physiological structure comprising:

(a) an exterior surface;

(b) a target portion configured to be accessed during a simulated medical procedure; and

(c) a generally planar conductive elastomer based evaluation circuit disposed between the exterior surface and the target portion, such that an incision through the conductive elastomer based evaluation circuit is required in order to open the evaluation circuit.

///

///

///

///

///

97. (Currently Amended) A physiological training and evaluation simulator suitable for training and testing personnel, comprising:

- (a) a simulated physiological structure; and
- (b) an evaluation circuit including a conductive elastomer, at least a portion of the evaluation circuit including the conductive elastomer being disposed within the simulated physiological structure, the conductive elastomer enhancing a realism of the simulated physiological structure, the portion of the evaluation circuit in the simulated physiological structure including a gap separating a first conductive segment from a second conductive segment, such that proper execution of a simulated medical procedure causes the gap between the first and second conductive segments to be eliminated without applying pressure to an external surface of the simulated physiological structure, thereby producing an indication that the simulated medical procedure has been properly performed.

98. (Currently Amended) A physiological training and evaluation simulator suitable for training and testing personnel, comprising:

- (a) a simulated physiological structure;
- (b) an evaluation circuit including a conductive elastomer, the conductive elastomer comprising a conductive powder dispersed in an elastomeric matrix, at least a portion of the evaluation circuit including the conductive elastomer being disposed within the simulated physiological structure, the conductive elastomer enhancing a realism of the simulated physiological structure, the evaluation circuit producing an indication of the performance of a simulated medical procedure; and
- (c) a switch that in a first position provides the indication to the trainee during the simulated medical procedure, and in a second position provides the indication to at least one of a proctor and a storage medium, such that in the second position the trainee does not receive the indication during the simulated medical procedure.

///

///

///

///

///

99. (Currently Amended) A physiological training and evaluation simulator suitable for training and testing personnel, comprising:

(a) a simulated physiological structure;

(b) an evaluation circuit including a conductive elastomer, at least a portion of the conductive elastomer being incorporated into the simulated physiological structure, the conductive elastomer enhancing a realism of the simulated physiological structure, the evaluation circuit producing an indication of the performance of a simulated medical procedure; and

(c) a switch disposed within the simulated physiological structure and incorporated into the evaluation circuit, the switch having a first closed position and a second open position, the simulator being configured such that during the proper execution of the simulated medical procedure, the switch moves from the first position to second position, thereby enabling the evaluation circuit to produce the indication, the switch having been selected from a group consisting of:

(i) a radiofrequency switch configured to detect a change in an amount of radiofrequency energy the switch is exposed to during the simulated medical procedure; and

(ii) a capacitance switch configured to detect a change in an ambient electrical field the switch is exposed to during the simulated medical procedure.

100. (Previously Presented) A physiological training and evaluation simulator suitable for training and testing personnel, comprising:

(a) a simulated physiological structure;

(b) an evaluation circuit including a conductive elastomer, at least a portion of the evaluation circuit including the conductive elastomer being disposed within the simulated physiological structure, the conductive elastomer enhancing a realism of the simulated physiological structure, the evaluation circuit producing an indication of the performance of a simulated medical procedure; and

(c) a tool to be used during the simulated medical procedure, the evaluation circuit having been configured such that the tool will induce a current in the evaluation circuit during the proper execution of the simulated medical procedure, thereby enabling the evaluation circuit to produce the indication, said induction occurring without said tool being in physical contact with the evaluation circuit.